

Master Ansible Like a Pro!

Inventory & Connection

```
# List all hosts  
ansible all --list-hosts  
  
# Ping all hosts  
ansible all -m ping  
  
# Run a command on all hosts  
ansible all -a "uptime"  
  
# Specify inventory  
ansible -i inventory.ini all -m ping  
  
# List inventory variables  
ansible-inventory --list
```

Ad-hoc Commands

- `# Run shell command`
 - `ansible all -m shell -a "df -h"`
- `# Copy a file to remote hosts`
 - `ansible webservers -m copy -a "src=app.conf dest=/etc/app.conf"`
- `# Install a package`
 - `ansible webservers -m apt -a "name=nginx state=present" -b`
- `# Start a service`
 - `ansible webservers -m service -a "name=nginx state=started" -b`

 **Tip:** Use ad-hoc commands for quick tasks without creating playbooks.

Playbooks

```
# Run playbook
```

```
ansible-playbook site.yml

# Limit execution to one host

ansible-playbook site.yml --limit web1

# Check syntax

ansible-playbook site.yml --syntax-check

# Dry run

ansible-playbook site.yml --check

# Start from a specific task

ansible-playbook site.yml --start-at-task="Install packages"

💡 Tip: Always dry-run (--check) before production deployments. 🛡
```

Secrets & Config

```
# Display changed configuration

ansible-config dump --only-changed

# Lint playbooks

ansible-lint playbook.yml

# Encrypt a secrets file

ansible-vault encrypt secrets.yml

# Decrypt

ansible-vault decrypt secrets.yml

# Run playbook with Vault

ansible-playbook site.yml --ask-vault-pass

💡 Tip: Always encrypt sensitive data with Vault. 🔒
```

Debugging & Facts

```
# Show all facts

ansible all -m setup

# Debug variable in playbook
```

```
- debug: var=app_port

# Enable verbose output

ansible-playbook site.yml -v

ansible-playbook site.yml -vvv
```

Recommended folder structure:

```
project/
    └── ansible.cfg
    └── inventory/
        |   └── dev
        |   └── prod
    └── roles/
        |   └── webserver/
        |       ├── tasks/
        |       ├── templates/
        |       ├── handlers/
        |       ├── vars/
        |       └── defaults/
    └── playbooks/
        └── site.yml
```

Best Practices

- Use **roles** for modularity
- Keep **secrets in Vault**
- Validate with **--check** before deployment
- Lint** playbooks to catch mistakes
- Document inventory and variables
- Use **tags** for selective task execution

